

Metal Fabrication/Welding

30-credit Technical Diploma

About the Program

Develop skills in interpreting blueprints; creating the exact shape of a part for cutting, fabrication and welding; and producing quality parts through the use of different techniques and materials. Learn to program and operate computer-controlled press brakes and shears, plasma arc cutting machines and microprocessor-based power sources. Welding techniques and joining methods are emphasized throughout the program.

Graduates may work in positions such as fabricator, laser operator, welder or welder/press operator.

Potential Job Titles

- Fabricator
- Laser Operator
- Welder/Press Operator
- Welder

Admission Process

- Fill out a WCTC application
- Send \$30 non-refundable application fee
- Send high school transcript or GED/HSED
- Send any previous college transcripts
- Complete Skills Assessment test (COMPASS)
- Begin pursuing Financial Aid options

For more information ,call 262.691.5200.

Required Courses		Credits
First Semester		
457-310	Blueprint Reading for Fabricators	2
457-320	Thermal Cutting Processes	2
457-350	Metal Fabrication Welding I	4
457-360	Metal Fabrication I	5
804-304	Industrial Math I	2+
809-345	Basic Workplace Psychology	1
Total semester credits		16
Second Semester		
422-303	Metal Technology for Fabricators	1
457-321	Thermal Cutting Processes II	2
457-355	Metal Fabrication Welding II	4
457-365	Metal Fabrication II	5
801-311	Communication in the Workplace	2+
Total semester credits		14
+ Proficiency exam available		
<i>Curriculum is current as of catalog printing. The most current curriculum requirements for graduation will be provided upon admission to program, or review at www.wctc.edu.</i>		

Metal Fabrication/Welding Required Courses

- 422-303 Metals Tech-Fabrication** 1
Become familiar with the elementary principles governing the behavior of ferrous and non-ferrous metals and the effects of welding on them. Review materials composition, production, properties, applications, and weldability.
- 457-310 Blueprint Reading-Fab** 2
Learn basic orthographic projection, sketching, dimensioning, structural shape identification, weld symbols, welding joint geometry, and the interpretation of fabrication from prints.
- 457-320 Thermal Cutting Processes** 2
Learn manual and machine oxygen fuel, air carbon, plasma, and laser cutting. Visually inspect welds and cut edges.
- 457-321 Thermal Cutting Processes II** 2
In this advanced course, continue to build skills with manual and machine oxygen fuel, air carbon, plasma and laser cutting.
Prerequisites: 457-320 Thermal Cutting Processes (or concurrent)
- 457-350 Metal Fabrication Welding I** 4
Gain the knowledge and skills needed to safely perform fundamental gas metal arc (MIG) and gas tungsten arc (TIG) welding while studying welding specifications, welding procedures, tacking procedures, and basic joining methods.
- 457-355 Metal Fabrication Welding II** 4
Continue to develop gas metal arc (MIG) and gas tungsten arc (TIG) welding skills. Demonstrate safe and correct welding techniques through the completion of projects.
Prerequisites: 457-350 Metal Fabrication Welding I

- 457-360 Metal Fabrication I** 5
Learn the basics of metal fabrication safety, production, measuring, hand tools, and layout. Learn how to use shears, forming, press brakes, box and pan brakes, and the hydraulic iron worker. Demonstrate proficiency in metal fabrication through related projects.
Prerequisites: 457-310 Blueprint Reading-Fab (or concurrent)
- 457-365 Metal Fabrication II** 5
Apply layout, blueprint interpretation, and welding and fabrication machine set-up and operation skills to safely and correctly complete metal fabrication projects.
Prerequisites: 457-360 Metal Fabrication I
- 801-311 Communication in the Workplace** 2
Expand level of awareness and skill in interpersonal communications, both oral and written, while focusing on securing and maintaining a job. Develop competencies in the area of listening, sending, and employability skills.
- 804-304 Industrial Math I** 2
Explore the topics of applied arithmetic and algebra during this individualized course. Study concepts related to measurement, fractions, decimals, percents, ratio and proportion, signed numbers, formula substitution, solutions to equations, tapers and gears.
- 809-345 Basic Workplace Psychology** 1
Develop the skills needed for building positive relationships with others by taking part in unique workplace scenarios and exploring psychological concepts.